



WATER IS THE MOST VALUABLE COMMODITY IN THE WORLD TODAY and may be the most precious resource the earth has to offer. We turn on our taps and expect clean water 24 hours each day. It can be easy to take safe drinking water for granted until you read about the troubles other areas of the United States and the world are having with their water supply. We don't often think about what we can't see, such as the services and infrastructure behind our taps; disinfection to keep the water safe; sampling and testing; pumps, pipes, and valves to move water around; reservoirs for storage; and hydrants for emergency situations. Behind the scenes, there's a lot going on. Yet for just pennies a gallon, our system delivers reliable, safe drinking water to Gresham homes and businesses.

We're pleased to tell you that Gresham is now the first city in the Pacific Northwest to have a completely automated water metering system. In 2014 we finished upgrading 100% of our water meters to Advanced Metering Infrastructure (AMI). Switching to this smart technology delivers benefits such as decreased operating costs and improved customer service. In addition, since the City no longer needs a full-time meter reader, we're using less fossil fuel and reducing the City's overall carbon footprint.

We continue to build foundations for the future to ensure that the delivery of safe drinking water is as resilient in response to natural disasters as it can be. The installation of a new pumping facility at Powell Loop and development of redundant groundwater supplies is done to make sure the health and safety of our community is safeguarded.

The City of Gresham is doing its part to help protect water and natural resources. I am proud of the work we do at the City and this year, as in years past, we're proud to let you know that Gresham's drinking water continues to meet all state and federal water quality standards. Thank you for the opportunity to serve our community!

Brian R. Stahl
Deputy Director
Department of Environmental Services

This report represents data from the calendar year 2014

The Bull Run Watershed Our primary source of drinking water flows from the Bull Run Watershed. The Bull Run is located in the Mt. Hood National Forest and managed by the Portland Water Bureau. This federally-protected watershed is reserved solely for the production of drinking water. Rain provides over 90 percent of the water in the watershed, averaging 130 inches a year. The Bull Run drains about 102 square miles of forested landscape. Water is disinfected at the headworks to maintain quality before flowing into our water distribution system. For more information, call **503-823-7770** or visit **portlandonline.com/water/**.



The Columbia South Shore Well Field is also owned by the Portland Water Bureau. It is used on occasion as a back-up to the Bull Run. Groundwater from these wells comes from three different aquifers. Portland actively protects its well field to prevent groundwater pollution. To learn more about Portland's protection program go to **www.portlandoregon.gov/water/groundwater** or call **503-823-7404**.

Gresham's drinking water continues to meet all state and federal water quality standards.

The Cascade Well Field Gresham and Rockwood Water People's Utility District own and operate the Cascade Well Field. We primarily use the wells during the summer months as a supplement to Bull Run water. This groundwater is from the Sand and Gravel Aquifer, located approximately 600 feet below the surface. Access to groundwater helps Gresham to manage both water expenses and water quality. The City works with Gresham businesses to protect this important investment. For more information about the Cascade Well Field or our Groundwater Protection Program, contact the City at **503-618-2525**.

Water Quality Data for Calendar Year 2014

Contaminants

Untreated source water from Bull Run

Regulated Contaminant	Minimum Detected	Maximum Detected	Maximum Contaminant Level (MCL), Treatment Technique or Maximum Residual Disinfectant Level (MRDL)	Maximum Contaminant Level Goal (MCLG) or Maximum Residual Disinfectant Level Goal (MRDLG)	Sources of Contaminant
Turbidity	0.19 NTU	4.04 NTU	Can't exceed 5 NTU more than 2x per year	N/A	Erosion of natural deposits
Total Organic Carbon	0.81 ppm	1.9 ppm	N/A	N/A	Naturally found in the environment
<i>Giardia</i>	Not detected	1 <i>Giardia</i> cyst in 50 liters	Treatment technique required: Disinfection to kill 99.9% of cysts	N/A	Animal wastes
Fecal Coliform Bacteria	Not detected	1 sample: 9 bacterial colonies* per 100ml water	>90% of samples during previous six months must have <20 bacterial colonies per 100ml of water	N/A	Animal wastes

Turbidity – Bull Run is an unfiltered surface water supply. The typical cause of turbidity is sediment suspended in the water that can interfere with disinfection and provide a medium for microbial growth.

Giardia – Wildlife in the watershed may be hosts to *Giardia*, the organism that causes giardiasis. Chlorine is used to control these organisms.

***Fecal Coliform Bacteria** – The presence of fecal coliform bacteria in source water indicates that water may be contaminated with animal wastes. Chlorine is used to control these bacteria. 100% of samples had 20 or fewer bacterial colonies per 100 milliliters of water (1 sample had 9 bacterial colonies per 100 milliliters).

Nutrients

Entry Points to Distribution System: Bull Run, Cascade Wells and South Shore Wells

Nitrate Nitrogen	<0.01 ppm	0.24 ppm	10 ppm	10 ppm	Natural aquifer deposits Animal wastes
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Metals and Minerals

Entry Points to Distribution System: Bull Run, Cascade Wells and South Shore Wells

Regulated Contaminant	Minimum Detected	Maximum Detected	Maximum Contaminant Level (MCL), Treatment Technique or Maximum Residual Disinfectant Level (MRDL)	Maximum Contaminant Level Goal (MCLG) or Maximum Residual Disinfectant Level Goal (MRDLG)	Sources of Contaminant
Arsenic	<0.50 ppb	1.46 ppb	10 ppb	0 ppb	Found in natural deposits
Barium	0.00072 ppm	0.016 ppm	2 ppm	2 ppm	
Chromium (total)*	< 0.50 ppb	0.20 ppb	100 ppb	100 ppb	
Copper	< 0.00050 ppm	0.00202 ppm	N/A	1.3 ppm	
Fluoride	< 0.025 ppm	0.15 ppm	4 ppm	4 ppm	
Lead	<0.05 ppb	0.15 ppb	N/A	0 ppb	

*During the year, tests with varying method reporting limits (MRLs) were used to analyze chromium. The sample with a result of <0.5 ppb was analyzed by a test with a less sensitive MRL and is why the minimum appears to be greater than the maximum.

Unregulated Contaminants

Entry Points to Distribution System: Bull Run, Cascade Wells and South Shore Wells

Contaminant	Minimum Detected	Average Detected	Maximum Detected	Sources of Contamination
Sodium*	2.8 ppm	8.03 ppm	21.6 ppm	Found in natural deposits
Radon*	310 picocuries per liter	310 picocuries per liter	310 picocuries per liter	

Tables and notes contain only contaminants detected in 2014, and indicate location where samples were collected. ppm=parts per million. ppb=parts per billion
Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to help EPA determine their occurrence in drinking water and potential need for future regulation.

*There is currently no drinking water standard for sodium or radon. At the levels found in drinking water, they are unlikely to contribute to adverse health effects.

DEFINITIONS:

Action Level

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level or MCL

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level or MRDL

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal or MRDLG

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Part per Million (ppm)

One part per million corresponds to one penny in \$10,000 or approximately one minute in two years. One part per million is equal to 1,000 parts per billion.

Parts Per Billion (ppb)

One part per billion corresponds to one penny in \$10,000,000 or approximately one minute in 2,000 years.

Picocuries Per Liter

A measurement of radioactivity. One picocurie is one trillion times smaller than one curie.

Treatment Technique

A required process intended to reduce the level of a contaminant in drinking water.

Special Notice for Immuno-compromised Persons

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

Environmental Protection Agency (EPA) and Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at **800-426-4791**.

Water Quality Data for Calendar Year 2014

Disinfectant Byproducts

Gresham Distribution System—Reservoirs, Tanks and Mains

Regulated Contaminant	Minimum Detected	Maximum Detected	Maximum Contaminant Level (MCL), Treatment Technique or Maximum Residual Disinfectant Level (MRDL)	Maximum Contaminant Level Goal (MCLG) or Maximum Residual Disinfectant Level Goal (MRDLG)	Sources of Contaminant
Haloacetic Acids ^{1 site} Annual Average	11 ppb 28.2 ppb	66.6 ppb	60 ppb	N/A	Byproduct of drinking water disinfection
Total Trihalomethanes ^{1 site} Annual Average	10.4 ppb 23.0 ppb	51.5 ppb	80 ppb	N/A	Byproduct of drinking water disinfection
Total Chlorine Residual	0.01 ppm	3.0 ppm	4 ppm	4 ppm	Chlorine and ammonia disinfection

GRESHAM SAMPLES FOR UNREGULATED CONTAMINANTS

During 2014, the City of Gresham sampled for more than 28 unregulated contaminants ranging from naturally-occurring metals to pesticides, flame retardants, hormones, and pharmaceuticals as mandated by the Federal Safe Drinking Water Act. The Unregulated Contaminant Monitoring Rule (UCMR) requires water providers nationwide to sample for unregulated contaminants once every five years. The EPA uses these sampling efforts to collect information about contaminants suspected to be present in drinking water but which are currently not regulated by health-based limits under the Federal Safe Drinking Water Act. The data help prioritize further regulatory actions intended to protect public health. More information about the UCMR is available from the Safe Drinking Water Hotline at 1-800-426-4791. The table below includes only those unregulated contaminants which were detected in Gresham's drinking water.

Unregulated Contaminants

Gresham Distribution System—Reservoirs, Tanks and Mains

Regulated Contaminant	Minimum Detected	Maximum Detected	MRL*	Sources of Contaminant
Chlorate	<20 ppb	73 ppb	20	Found throughout the environment
Strontium	11 ppb	49 ppb	0.3	
Vanadium	<0.2 ppb	30 ppb	0.2	
Chromium-6	<0.03 ppb	.073 ppb	0.03	
Chromium	<0.2 ppb	0.28 ppb	0.2	

* MRL is the UCMR Minimum Reporting Level

Reducing Exposure to Lead

The City has removed all known lead service connections from our water distribution system. Exposure to lead through drinking water is possible if materials in a building's plumbing contain lead. The level of lead in water can increase when water stands in contact with lead-based solder and brass faucets containing lead.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested.

INFORMATION ON LEAD IN DRINKING WATER, testing methods and steps you can take to minimize exposure is available from the LeadLine, 503-988-4000, www.leadline.org or the Safe Drinking Water Hotline 1-800-426-4791, www.epa.gov/safewater/lead.



Lead and Copper Sampling at High-risk Residential Taps

90th % Values	# of Sites Over Action Level (AL)	Rule Exceedance	MCLG	Typical Source
Copper 0.34 ppm	0 of 114 samples exceeded AL (1.3 ppm)	Over 10% of homes tested have levels > 1.3 ppm	1.3 ppm	Corrosion of household and commercial plumbing systems
Lead 14 ppb	11 of 114 samples exceeded AL (15 ppb)	Over 10% of homes tested have levels > 15 ppb	0 ppb	

Contaminant

Entry Points to Distribution System: Bull Run, Cascade Wells and South Shore Wells

Regulated Contaminant	Minimum Detected	Maximum Detected	Maximum Contaminant Level (MCL), Treatment Technique or Maximum Residual Disinfectant Level (MRDL)	Maximum Contaminant Level Goal (MCLG) or Maximum Residual Disinfectant Level Goal (MRDLG)	Sources of Contaminant
Microbiological Contaminants					
Total Coliform Bacteria	Not detected	1.43% (1 out of 70) samples in Oct. had detectable coliform bacteria	5.0% of monthly samples with detectable coliform bacteria	0 samples with detectable coliform bacteria	Found throughout the environment



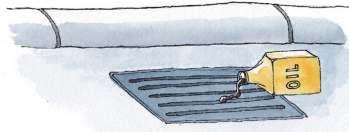
What the EPA Says About Drinking Water Contaminants

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at **800-426-4791** or at **www.epa.gov/safewater**.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants in drinking water sources may include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from wildlife or septic systems.
- **Inorganic contaminants**, such as salts and metals, which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as farming, urban stormwater runoff and home or business use.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes, and can also come from gas stations, urban stormwater runoff and septic systems.
- **Radioactive contaminants**, which can occur naturally. In order to ensure that tap water is safe to drink, the EPA has regulations that limit the amount of certain contaminants in water provided by public water systems and requires monitoring for these contaminants.



Sign up for Public Alerts

PublicAlerts is a communication system connecting residents to real-time information. The system can reach any number of Multnomah County residents when fast, effective communication is essential to your safety. Most landline phone users with published numbers are already included in the system. Cell phone users who wish to receive notifications must register their numbers at **www.PublicAlerts.org**.

 **PublicAlerts**

What types of emergency notifications can I expect to receive? The telephone number(s) you register will receive notification only when their associated addresses are impacted by an emergency. Here are some examples of emergencies that may activate the Public Alerts notification system:

- Earthquake
- Flooding
- Boil water notice
- Hazardous material spill
- Water main breaks or other service outages
- Large fire
- Tornado or other severe weather event
- Hostage or terrorist event
- Major landslide
- Public health emergency
- Volcanic eruption

Are there others ways to receive emergency notifications? Yes. PublicAlerts is one among several methods of emergency communication. City and County officials still work closely with traditional broadcast and print media to reach the public.

FOR MORE INFORMATION about the City of Gresham's efforts around emergency resilience, visit our website: **www.GreshamOregon.gov/EmergencyManagement/** or **www.PublicAlerts.org**.

Learn More

about your water at:
www.GreshamOregon.gov/water

You'll find information about these topics, and more:

- ✓ **Water conservation**
- ✓ **Water quality**
- ✓ **Toilet rebates**
- ✓ **Groundwater protection**
- ✓ **Utility billing and rates**
- ✓ **Testing for lead**
- ✓ **Emergency resilience**
- ✓ **Notes on contaminants**

Oregon Health Authority
Drinking Water Program
971-673-0405

www.oregon.gov/DHS/ph/dwp

Get Involved

To learn about
City Council meetings
call **503-618-2697**.

You can find more information
about City initiatives and
volunteer opportunities at:
www.GreshamOregon.gov

**CITY OF
GRESHAM**

1333 NW Eastman Parkway
Gresham, OR 97030

503-618-2525

Gresham Public Water System #4100357

ON THE COVER: Gabbert Hill Reservoir,
recently rebuilt and earthquake-proofed.